User Manual

DIGI-SENSE™ Borescope

Model 20250-28

CE

THE STANDARD IN PRECISION MEASUREMENT

Introduction

The Digi-Sense Borescope (Model 20250-28) is ideal for the inspection of ductwork, wiring locations, piping, vehicles, and much more. An adjustable LED light on the camera tip provides necessary light in dimly lit areas and adjusts down to eliminate washout when viewing reflective objects.

Unpacking

Check individual parts against the list of items below. If anything is missing or damaged, please contact your instrument supplier immediately.

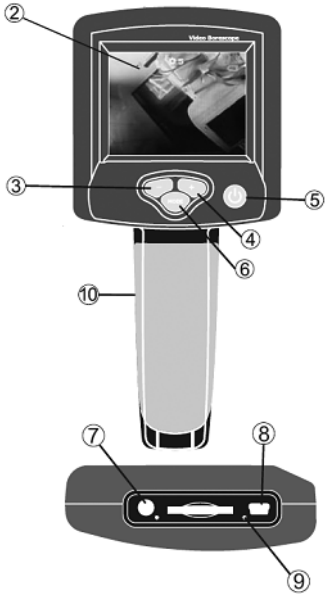
1. Borescope with camera
2. 3.7 V lithium battery (installed)
3. USB cable
4. DC5V charger
5. Video output cable
6. Mirror, hook, and magnet
7. User manual

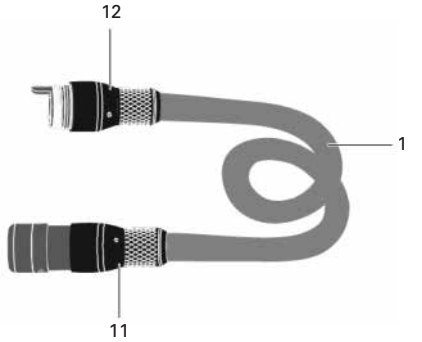
Key Features

- LCD
- Four LED lights for operation in dark environments
- Menu languages: English, German
- 180° image rotation
- TV OUT jack
- USB charging (Li battery)

Meter Description

1. Gooseneck
2. LED light level
3. **DECREASE** (-) button
4. **INCREASE** (+) button
5. **POWER** button
6. **MODE** button/ **CONFIRMED** button
7. TV OUT jack
8. USB charge port
9. **RESET** button
10. Lithium battery compartment
11. Camera
12. Camera connectors





Setup and Operation

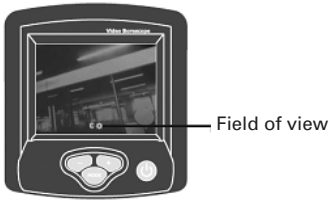
Power

Press the Power ON/OFF button to turn on and press again to turn off.

Adjusting Brightness

The default light setting is three for the LED light on camera head. Increase the light level by pressing the **INCREASE (+)** button until the brightest level displays on the top middle of the screen. Decrease the light level by pressing the **DECREASE (-)** button until the light turns off. **Note:** 5=brightest and 1=darkest; the LED shuts off at 0.

Rotating Images



The image angle can be rotated from 0° to 180°. To rotate, press the **MODE** button. Each press rotates the image 90°.

System Setup

1. To move the cursor, press the **DECREASE (-)** button to move it down and the **INCREASE (+)** button to move the cursor up.
2. To adjust the LCD settings, press the **Power ON** button (if you have not already). With the unit on, hold the **MODE** button for two seconds. The Image Setting screen will appear. Adjust BRIGHTNESS, CONTRAST, DEFINITION, COLOR, and LANGUAGE using this screen.

3. Use the **INCREASE (+)** and **DECREASE (-)** buttons to toggle through the options. Press the **MODE** button to select the setting you would like to adjust. Use the **INCREASE (+)** and **DECREASE (-)** buttons to change the value to your preferred setting. Press the **MODE** button to confirm the setting and return to main menu.
4. Select DEFAULT to return the unit to the best-calibrated default value.

Changing the Language Setting

1. In the Image Setting screen use the **DECREASE (-)** button to toggle to LANGUAGE and press the **MODE** button.
2. Select preferred language (English or German) using the **INCREASE (+)** button.
3. Once selected, press the **MODE** button to set and return to the main menu.
4. Toggle to EXIT and press the **MODE** button to return to camera mode.

Displaying Video on a Television

1. Using the video output cable, insert the earphone plug into the TV OUT jack in the side panel of the borescope.
2. Insert the yellow video plug into the corresponding jack on the TV or other video display.
3. Power the borescope **ON**. The content will still be controlled by the instrument but will display on the television. Only live video will be display on the TV or video display. All other functionality will be limited to the LCD.

Charging the Borescope

1. Connect the USB cable to the DC5V charger and borescope. The unit will automatically power on and prompt you to select the Standby Mode.
2. The default setting is YES. Use the **INCREASE (+)** and **DECREASE (-)** buttons to toggle to your preffered choice.
3. Press the **MODE** button to choose your desired setting.
4. If YES, the system will shut off all functionality until the battery is charged. To turn the unit back on, disconnect the power source and press the **Power ON** button. If NO, select the **MODE** button and the unit will return to normal functionality.
5. To confirm the system is in working condition, press the **INCREASE (+)** button for two seconds. The battery display will show on the right side of screen. The , , , indicator will show the amount of charge left in the battery.

Resetting the Borescope

If the system stops operating unexpectedly, press the **RESET** button on the left side of the instrument. The instrument can be operated normally after powering up.

Specifications

Sensor size	¼ inch CMOS
Sensor pixel	300,000
Maximum resolution	640 x 480
Maximum frame rate (FPS)	30 FPS/S
Color median	24 Bit
Focusing method	Fixed focus 15-25 cm (5.9-9.8")
Gooseneck length	1 m (39")
Camera diameter	17 mm (0.66")
TFT-LCD	
Color TFT-LCD size	3.0 inch
Display resolution	960 (W) x 240 (H)
Active area	60 mm x 45 mm
Light	
Light Source	4 LED
Adjustable light intensity level	6 level
Power	
Battery	Lithium batteries 3.7V/2000mAh
Working current	MAX 480 mA
Standby current	MAX 5 ma
Temperature	
Operating temperature	0 to 50°C (32 to 122°F)
Storage temperature	–20 to 60°C (–4 to 140°F)
Relative humidity	5 to 85%
Product attributes	
Size	100 x 95 x 235 mm (3 15⁄16" x 3¾" x 9¼")
Weight	596.2 g (1.3 lb)

Maintenance, Recalibration, and Repair

- Take out the battery when the instrument is not in use for a long period of time.
- Clean the camera before operation.
- Use only a 3.7V Li battery.
- The gooseneck should not be bent to a diameter less than five inches.
- To avoid instrument damage and injury, the gooseneck cannot be inserted into rotational gear wheels.
- To avoid electrical shock, the instrument and gooseneck should not come in contact with high-voltage objects during operation.

For Product and Ordering Information, Contact:

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